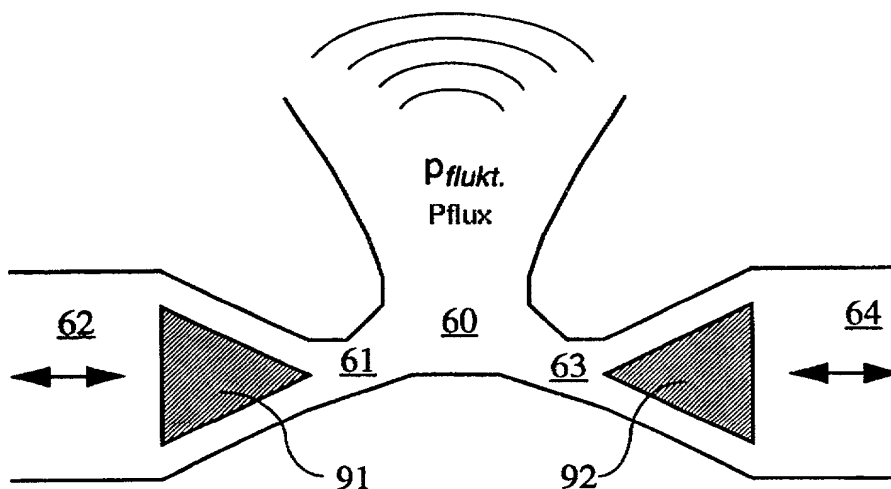




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04R 1/42, 23/00 // G10K 9/04, 11/178	A1	(11) International Publication Number: WO 99/53720 (43) International Publication Date: 21 October 1999 (21.10.99)
(21) International Application Number: PCT/SE99/00586 (22) International Filing Date: 9 April 1999 (09.04.99) (30) Priority Data: 9801257-8 9 April 1998 (09.04.98) SE (71)(72) Applicant and Inventor: WIBERG, Per-Arne [SE/SE]; Stenhuggerivägen 45, S-302 40 Halmstad (SE). (72) Inventors; and (75) Inventors/Applicants (for US only): EMBORG, Urban [SE/SE]; Husarvägen 3, S-590 72 Ljungsbro (SE). SARIN, Sohan [SE/SE]; Stationsgatan 2 B, S-582 42 Linköping (SE). HOLMGREN, Joakim [SE/SE]; Hejdegatan 52 B, S-582 43 Linköping (SE). (74) Agent: LUNDMARK, Jan-Erik; Saab AB, Patent Dept., S-581 88 Linköping (SE).		(81) Designated States: AU, BR, CA, CN, CZ, EE, HR, HU, ID, IL, JP, KR, LT, LV, MX, NO, NZ, PL, RU, SE, SG, UA, US, ZA, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>In English translation (filed in Swedish).</i>

(54) Title: PNEUMATICALLY DRIVEN LOUDSPEAKER AND ITS USE

**(57) Abstract**

The invention presented here refers to a pneumatically driven loudspeaker, comprising at least one first chamber (1, 62) having higher pressure than the surroundings and with at least one first opening (8, 61) to the surroundings. The loudspeaker in addition comprises a second chamber (2, 64) with lower pressure than the surroundings and with at least one second opening (9, 63) to the surroundings. The first and the second openings can by means of valve mechanisms (3, 65, 91, 92) alternately open and close at a selected frequency, resulting in pressure fluctuations which give rise to sound of the desired frequency. The loudspeaker according to the invention can be used in hi-fi applications as well as in active noise suppression in jet engines, in ventilation systems, in gas turbine outlets and in exhaust systems in combustion engines.